

REMARKS

Applicants thank the Examiner for thorough consideration given the present application. Claims 1-26 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the remarks set forth below.

Entry of Response

Since the present response includes only remarks, Applicants submit that entry of the remarks and reconsideration by the Examiner is appropriate.

Allowable Subject Matter

It is gratefully acknowledged that the Examiner considers the subject matter of claims 1-8 as being allowable.

Rejection under 35 U.S.C 103

Claims 9, 10, 15-19 22, 23, 25, and 26 stand rejected under 35 U.S.C. 103(a) as being obvious over Katakura et al. (U.S. Patent 5,754,154) in view of Kikuo et al. (U.S. Patent 5,250,937) and Reents et al. (U.S. Patent 5,534,889). This rejection is respectfully traversed.

The Examiner states that Katakura et al. teaches a charge characteristic compensating circuit for liquid crystal display panel, a voltage supply, a gate line driver and a current controller. The Examiner admits that Katakura et al. fails to teach gate lines and a gate line driver connected to a scan line and scan line

driver, a voltage converter generating a high level gate voltage, a gate line controller including a resistor and a thermistor, receiving a high level gate voltage from the voltage converter and supplying a controlling signal. The Examiner relies on Kikuo et al. to teach gate lines and gate line driver connected to scan line and scan line driver, voltage converter generating a high level gate voltage, a gate line controller including a resistor and thermistor, receiving a high level gate voltage from the voltage converter and supplying a controlling signal. The Examiner feels that it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Kikuo et al. and Katakura et al. for it to have a high luminance output, accurate gray levels, to minimize artifacts and flickering. However, the Examiner admits that the combination of Katakura et al. and Kikuo et al. still fail to teach the entire subject matter of the claims. In particular, the Examiner admits that these two references fail to teach a gate line driver receiving the controlling signal from the gate line controller and supplying to the gate line a voltage varied according to the controlling signal to drive the gate line.

The Examiner relies on Reents et al. to teach a gate line driver receiving the controlling signal from the gate line controller and supplying to a gate line a voltage varied according to a controlling signal to drive the gate line.

Applicants submit that the claims are not obvious over the combination of references. First, Applicants submit that the Examiner has misunderstood the teachings of the Reents et al. reference. Secondly, Applicants submit that it would not be obvious to combine these three references and that the Examiner has not

shown any motivation for combining them. Thirdly, Applicants submit that the combination of three references does not meet all the terms of the claims.

Applicants also note that in response to the previous Amendment, the Examiner has replaced the third reference, Lee, with the current third reference Reents et al. However, the first two references Katakura et al. and Kikuo et al. are the same as in the previous rejection. The Examiner is referred to the arguments in the Amendment of May 4, 2004 for further discussion of this combination of references. As indicated there, the Examiner has admitted at least four teachings that are not shown in Katakura et al. The Examiner relies on Kikuo et al. to teach some of these. However, the Examiner admits that even this combination does not show all the missing features.

The Examiner stated that Reents et al. has been cited to show a gate line driver receiving a controlling signal from a gate line controller and supplying to a gate line voltage varied according to the controlling signal to drive the gate line. Applicants disagree with the Examiners understanding of this reference. The Examiner is apparently referring to thermistor 310 which is a part of the internal display panel 24, which produces a signal CTHERM which is applied to a contrast control 25 and used to adjust the bias voltage CONTRAST. The specific connections are described at column 10, lines 5-15. When the resistance in thermistor 310 changes, it causes the current flowing through resistor 742 to change and as a result the output voltage CONTRAST changes. Thus, this reference describes how the contrast signal is adjusted according to the temperature. However, it does not teach a gate line driver receiving a controlling

signal from the gate line controller and supplying to a gate line a voltage varied according to the controlling signal to drive the gate line as suggested by the Examiner. In fact, the specific connections of the contrast signal are not described at all. While admittedly this reference shows a thermistor which measures the temperature and has a changing resistance which helps to adjust a certain voltage signal, it does not the connection suggested by the Examiner. Accordingly, Applicants submit that the Examiner's understanding of the reference is incorrect. If the Examiner persists in using this reference, he is requested to explain how the reference shows a gate line driver receiving a controlling signal from the gate line controller and the other features he has attributed to Reents et al.

Furthermore, Applicants submit that it would not be obvious to one of ordinary skill in the art to combine these three references. Each of these references show a different arrangement for a system involving a display panel. There is no teaching of the need to incorporate the various teachings of the three references together. The Examiner has made general statements regarding that it would be obvious to improve the contrast, to have a high luminance output, accurate gray levels and minimize artifacts and flickering. However, Applicants still submit that this is not sufficient motivation for one skilled in the art to see the need to make such a combination. Thus, there is nothing in Katakura et al. that would indicate that it is necessary to improve its contrast, for example. Accordingly, Applicants submit that sufficient motivation is not present to make such a combination of references.

Furthermore, Applicants submit that even if the three references are combined, they do not teach all the features of the claimed invention. Thus, the references do not show the gate line controller including a resistor and a thermistor for supplying a controlling signal that varies as the ambient temperature varies, with the gate line driver receiving this controlling signal and supplying to a gate line a voltage varied according to the controlling signal to drive the gate line. For these reasons, Applicants submit that the Examiner is incorrect that claims 9-26 are obvious over this combination of references.

Claims 11-14 and 24 stand rejected under 35 U.S.C. 103(a) as being obvious over Katakura et al. in view of Kikuo et al. and Reents et al. as applied above in further view of Marks et al. (U.S. Patent 5,119,215). Claims 20 and 21 stand rejected under 35 U.S.C. 103(a) as being obvious over Katakura et al. in view of Kikuo et al. and Reents et al. as applied above and further in view of Noma et al. (U.S. Patent 6,184,631). These rejections are respectfully traversed.

The Examiner cites Marks et al. to teach a thermistor with a positive temperature coefficient. Likewise, Noma et al. teaches the voltage divider which includes a positive temperature coefficient. However, even if these references do teach these features, Applicants submit that they do not aid the other references in overcoming their rejection noted above. Accordingly, Applicants submit that the claims are likewise allowable over these combinations of references.

Conclusion

In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied upon by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectively requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse (Reg. No. 27,295) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.


Respectfully submitted,

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Attachment(s)